A STUDY TO EVALUATE THE EFFECTIVENESS OF NIPPLE STIMULATION FOR PROGRESS OF LABOUR DURING FIRST STAGE, AMONG PRIMIGRAVIDA MOTHERS IN A SELECTED HOSPITALS AT THIRUNELVELI TAMIL NADU.

A DISSERTATION SUBMITTED TO THE TAMIL NADU DR. M.G.R.MEDICAL UNIVERSITY, CHENNAI, IN THE PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREEOF MASTER OF SCIENCE IN NURSING

OCTOBER 2015

A STUDY TO EVALUATE THE EFFECTIVENESS OF NIPPLE STIMULATION FOR PROGRESS OF LABOUR DURING FIRST STAGE, AMONG PRIMIGRAVIDA MOTHERS IN A SELECTED HOSPITAL AT THIRUNELVELI, TAMIL NADU.

APPROVED BY THE DISSERTATION COMMITTEE ON:JULY 2015

PRINCIPAL : _____

Dr.MargaretRanjitham M.Sc .N., Ph.D.
Nehru Nursing College
Vallioor.

PROFESSOR OF RESEARCH : _____

Dr .Chandrasekharan M.Sc.N., Ph.D.
Vice Principal,
Nehru Nursing College,
Vallioor.

RESEARCH GUIDE : _____

Mrs. Anbarasi M.sc. N,
AssociateProfessorof OBG Department,
Nehru Nursing College,
Vallioor.

A DISSERTATION SUBMITTED TO THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY, CHENNAI,IN PARTIAL FULLFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING.

OCTOBER 2015

BONAFIDE CERTIFICATE

This is to certify that the dissertation entitled **"A Study To EvaluateThe Effectiveness of Nipple Stimulation For Progress of Labour During First Stage, Among Primigravida Mothers in Selected Hospital at Tirunelveli**." is a bonafide research work done by **Mrs. J. Suja,M.sc. Nursing II year** under the guidance of **Mrs. Anbarasi.M.sc.N, Associate Professor of OBG department** in partial fulfillment for Degree of Master of Science in Nursing, under The Tamil Nadu Dr. M.G.R. Medical University ,Chennai.

Dr.Margaret Ranjitham M.Sc.N., Ph.D.
Principal,
Nehru Nursing College,
Vallioor.

Place: Vallioor.
Date:

CERTIFICATE BY THE GUIDE

This is to certify that the dissertation entitled **"A Study To Evaluate The Effectiveness of Nipple Stimulation For Progress of Labour During First Stage, Among Primigravida Mothers in Selected Hospital at Tirunelveli."** is a bonafide research work done by **Mrs.J.Suja,M.sc. Nursing II yea**r Nehru Nursing College, Vallioor, in partial fulfillment for the Degree of Master of Science in Nursing under The Tamil Nadu Dr.M.G.R.Medical University, Chennai.

Place:Vallioor.
Date:

Mrs.Anbarasi, M.Sc.N,
Associate Professor,
Obstetrics and Gynecological Nursing,
Nehru Nursing College,
Vallioor.

DECLARATION

I hereby declare that the present dissertation titled **"A Study To Evaluate The Effectiveness of Nipple Stimulation For Progress of Labour During First Stage, Among Primigravida Mothers in Selected Hospital at Tirunelveli.",** is the outcome of the original research work undertaken and carried out by me, under the guidance of **Mrs. Anbarasi.M.Sc.N,**AssociateProfessor of Nehru Nursing College, Vallioor. I also declare that the material of this has not formed in anyway, the basis for the award of any degree or diploma in this university or any universities.

Place:Vallioor
Date:

Mrs. J.Suja,
M.Sc. N, II year.

ACKNOWLEDGEMENT

Hither To Hath The Lord Helped Us"

As I have come to the successful completion of my study, I am extremely happy to recall many generous persons to whom I am indebted for their valuable contribution both directly and indirectly. I offer my sincere thanks to all those who had extended their assistance in this endeavour.

With deep sense of gratitude, I thank the God Almighty for His grace and close presence, which strengthened me and sustained interest throughout this project.

I extend my heartfelt thanks to the Chairman,**Mr.Kanoji, B.Sc.,** and the Deputy Chairman,**Mr.Vinoji,B.A.,**of Nehru Nursing college for providing an opportunity to promote my professional life.

I convey my immense gratitude and sincere thanks to our beloved principal, **Dr.MargaretRanjithamM.sc.,N,Ph.D.** Nehru Nursing college, Vallioor for her expert guidance, corrections, suggestions and constant encouragement throughout the period of study.

I convey my immense gratitude and sincere thanks to our beloved Vice principal**, Dr. Chandra Sekharan M.sc.N.,Ph.D.** Nehru Nursing college, Vallioor for his expert guidance, suggestions and constant encouragement throughout the period of study.

It is my duty to extend my sincere thanks to my class co-ordinator **Prof.Mrs. Baby Uma.M.Sc. N.**, for her enthusiasm, constant support and guidance and valuable suggestions throughout my work.

It is my duty to extend my sincere thanks to my research guide **Mrs. Anbarasi. M.Sc.N.,**Associate Professor of Obstetrical and Gynecological Nursing Department, Nehru Nursing College, Vallioor for her enthusiasm, constant support and guidance, spiritual support and constructive criticism, encouragement, perfect direction and valuable suggestions throughout my work.

My sincere thanks **to Dr.PunithaGeorge, MBBS, DGO.**George Mission Hospital, Nagercoil, and **Dr.Mathubala,MBBS.,MD.DGO.** Lakshmi Mathavan Hospital Tirunelveli for her help and valuable suggestions for conducting my study.

It is my duty to express my sincere thanks to **Mrs.JoyBryna M.Sc.N.,** H.O.D of Obstetrical and Gynecological Nursing Department, Nehru Nursing College, Vallioor for her concern, help, constant guidance, encouragement, suggestion to finish my study.

I extend my great thanks to our Research Committee Members for the valuable suggestion.

I extend my great thanks to **Dr. MahalingaKannan Ph.D(stat) and Dr.Anto** for the valuable suggestion and analysis and presentation of data.

I extend my thanks to**Mrs.Nambi,** Librarian of Nehru Nursing college for her help in providing books, journals and literature for my study.

I extend my great thanks to **Abi Computers** and for their patience, understanding regularly the needs of my study and the timely completion of the manuscript.

I convey my lovely thanks to my dear husband **Mr.J. Iwin Justus** my beloved son **Mast. I.S. Aaron Suwin**, my parents **Mr.M. Joseph, Mrs.C. Elizabeth,** my father-in-law **Mr. Jecinthu,** my mother-in-law **Mrs.Mary Janet** who is the backbone in completion of the study .

I would like to extending my thanks to continue to all my friends, well wishers and my family members for their support, guidance and care who were directly and indirectly involved in my progress of work and the successful completion of the study

ABSTRACT

The labour process is an exciting and anxious time for the women and her significant to others. Now adays varies non pharmacological methods used to induce the labour.In this Nipple Stimulation is a one of the natural method often recommended by the midwives. The researcher was carried out to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage, among primigravida mothers at selected Hospitals in Tirunelveli."

Sixty samples were selected and equally allocated in to control and experimental group by using convenience sampling method.The study findings shows that20(66.67%) of the primigravida mothers had less than 8 hours of duration,10(33.33%) mothers had 8-10 hours duration of first stage of labour and none of the mothers had the >10 hrs of duration of first stage of labour. In the control group none of the mothers had the less than 8 hours of duration, 6 (20%) mothers had 8-10 hours duration of first stage of labour24 (80%) mothers had more than10 hours duration of first stage of labour (table 2 and figure 2). The study findings shows that the intensity of uterine contraction among experimental group, during pre test 8 mothers did not have uterine contractions and 21 mothers had very mild uterine contraction. In the posttest 22 mothers had mild uterine contractions, and 6 mothers had low moderate uterine contractions. The obtained Chi-square value was 52.36 and it shows the value was statistically significant at 0.05 level.So the Research Hypothesis was accepted.

The findings of the study concluded that the Nipple Stimulation was effective on the increased the uterine contraction , cervical dilatation and reduced the duration of first stage of labour among primigravida mothers.

LIST OF CONTENTS

LIST OF TABLE

LIST OF FIGURES

CHAPTER-I

INTRODUCTION

"Birthing is the most profound initiation to spirituality a women can have"

-Robin Lim

Child birth process is a miracle of every woman's life. The women underwent the physiological changes during pregnancy period. Reproductive system is a specialized system of human body especially in females. Child birth is a one of the great event in every woman's life. Women have fantasies about pregnancy and motherhood. The uterine contractions during child birth was unique, sweet rememberable event in their life.

Labour is a coordinated sequence of involuntary uterine contractions that first result in effacement and dilatation of cervix and then the conjunction with voluntary bearing down efforts,resulting in delivery,the expulsion of the products of the fetus and placenta.

Induction of labour refers to the process of the uterine contractions are initiated by artificially that means medically or surgically inducing the onset of labour. The appropriate and timely intervention is based upon accurate identification of fetus at risk. Induction is indicated when the benefits to either mother or fetus out way those of continuing the pregnancy.

The overall rate of induction of labour in the United States in 1993 was 134 per 1,000 live births, or over 527,000 of the four million births that occur annually in the united states. Indications for labour induction include postdated pregnancy, premature rupture of membranes, and maternal medical complications, such as gestational diabetes mellitus and pregnancy induced hypertension.

The purpose of induction of labour is to effect the birth of the baby. Successful induction depends on adequate contractions, which are effective in bringing about progressive dilatation of the cervix.The benefits of Nipple Stimulation is promote uterine contractions,improving the bone density,and improves the social behaviours such as trust ,contentment,empathy,bonding and love.

The cervix is normally two centimeters long,firm and closed throughout pregnancy. Maturation of the cervix is the result of physiological processes that soften,efface and dilate the cervix prior to the onset of labour. While inducing the labour the cervix is undergone structural changes like softening, dilatation and effacement.

The method of induction should depend on the urgency of delivery,setting for induction and preference of the provider and patient. Before induction of labour is attempted,accurate assessment of gestation age,fetal presentation,fetal and maternal well being needs to be completed.

Nipple Stimulation has been suggested as an effective non pharmacological method of inducing labour. It is both an inexpensive and non medical intervention which allows women greater control over the induction process. It is also indeed a very simple procedure that can be practiced even by uneducated class of women with out any difficulty.

Nipple Stimulation is a natural way that mothers in labor can speed up the progress of labour. Mothers in labour,who are progressing slowly, can gently pull or have their partner gently suck on their nipple. The Stimulation of the Nipples release oxytocin,the hormone that causes the uterus to contract, and dilate the cervix to birthing naturally.

Non pharmacologically Nipple Stimulation is often recommended by midwives as a natural way to induce labour. It can be quite intensive and does seem to bring a positive outcome. Nipple Stimulation is done by gentle rubbing (or) rolling the Nipple between the fingers for five minutes and resting for 15 minutes. This type of method is said to work because the hormone oxytocin is released during breast stimulation. This can be done for 10 to 15 minutes every 60 to 90 minutes for several hours. Stop once the contractions are established.

Oxytocin is a naturally occurring hormone that exerts a stimulatory effect on myometrium contractility. Oxytocin is a hormone released from the posterior pituitary gland. The uterus becomes more sensitive to oxytocin as labour progresses. Concentration of oxytocin in the maternal circulations do not change significantly during pregnancy or prior to the onset of labour during the onset of labour oxytocin

concentration level will be increased. There is however an increased uterine sensitivity to oxytocin during labour.

Contractions are often described as a cramping or tightening sensation that starts in the back and moves around to the front in a wave-like manner. Others say the contraction feels like pressure in the back. During a contraction, the abdomen becomes hard to touch. In the childbirth process, the work of labor is done through a series of contractions. These contractions cause the upper part of the uterus (fundus)becomes tighten and thicken and lower portion of the uterus stretch and relax,it will help the baby to come out from the uterus and enter into the birth canal for delivery.

Nipple Stimulation is a one of the non pharmacological and effective method for inducing labour. Nipple Stimulation will help to promote the uterine contraction and shortening the length of the first stage of labour.

NEED FOR THE STUDY

Induction is more likely to succeed when the body had already begun to prepare for labor. Induced contractions may be more powerful than non-induced labour. Some natural methods of induction was followed before moving the pharmacological methods.The non pharmacological methods includes Nipple Stimulation, stroking nipples, using a breast pump, and oral stimulations.If contractions come more than every four minutes, or last longer than one minute discontinue the induction.

The labour is stimulated naturally through the production of labour-inducing hormones (oxytocin) in a pregnant woman. Once these hormones attain a certain level in the woman's bloodstream, uterine contractions will increase to the rate that the final stages of birth will occur. Thus, where the natural output of these hormones is insufficient, the problem becomes one of stimulating the woman in order to create the production of this hormone,providing a substitute for such stimulation.

The Nipple Stimulation is recommended by providers and used by labouring women for labour augmentation. Nipple Stimulation is often used as a casual form of augmentation. Breast massage and Nipple Stimulation have been shown to

facilitate the release of oxytocin from the posterior pituitary gland. The most commonly prescribed technique involves gently massaging the breasts or applying warm compresses to the breasts for one hour, three times a day.

Helena Wigert.(2001), Conducted a study that increases the production of this hormone is to gently stimulate the Nipples of the breasts of the pregnant woman. This stimulation gives the effect of a baby's suckling, which enhances the hormonal output to induce labour. Manual stimulation of the Nipples is considered to be more desirable by many since it generates "natural" body hormones. It also avoids the intrusive delivery of oxytocin, which is typically administered in an intravenous drip. In recent years, Nipple Stimulation has been a common practice as a means for producing uterine contractions. This stimulation produces contractions in order to: (1) perform contraction stress tests, to judge the stress on the foetus; (2) to induce labour; (3) to ripen the cervix; and (4) to manage the period of labour just before birth.

Kavangh.et.al,(2005), Conducted a study to investigate the Breast Stimulation for cervical ripening and induction of labour. Six trials of woman at term with premature rupture of membranes and no contraction were included in the studies. one trial that made comparison of Breast Stimulation by a variety of techniques was found to be as effective as oxytocin alone in reducing the number of woman not in labour at 72hours after method initiation (n=37, 58.8 vs 25%; relative risk, 2.35; 95%confidence interval, 1.00%-5.54%one randomized control trial) overall, the concluded trials had small study populations limited maternal and fetal outcomes. He offered no conclusions on the safety of Breast Stimulation but suggest further research regarding safety and efficacy as well as maternal satisfaction with the intervention.

Ellen J. Razgaitis.(2010), Conducted a study to find out the management of Protracted Active Labour with Nipple Stimulation. A Viable Tool for Midwives? The patient is a 36-year-old G3P2 at 39 gestational weeks who presented in labour to the hospital where she planned to give birth. On admission, her initial cervical examination was 2 to 3 cm, 100% effacement, −1 station, and membranes intact. She reported regular contractions for 2 hours prior to coming to the hospital. At 12 hours after admission, the midwife suggested Nipple Stimulation in an effort to enhance uterine forces and promote progressive cervical change.

The researcher during her clinical experience has observed all mothers suffer physically and emotionally due to contraction. Though uterine contractions a positive signal for the starting of labour. But it gives noxious experiences to the mother. It becomes almost nursing responsibility to faces the event of labour as a positive one in memories of the mothers. There are many pharmacological methods for inducing uterine contraction, but it may bring more side effects for mother and fetus. The investigator being a nurse interested in characterizing some non pharmacological intervention, the experts in field and many researchers has given idea on Nipple Stimulation on uterine contraction during first stage of labour. Therefore the researcher interested to do a study to evaluate the effectiveness Nipple Stimulation for progress of labour during first stage, among primigravida mothers.

STATEMENT OF THE PROBLEM

"A study to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage, among primigravida mothers in selected Hospitals at Tirunelveli."

Objectives of the study

1. To assess the progress of labour among primigravida mothers in both experimental group and control group.
2. To evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage among primigravida mothers in experimental group and control group.
3. To determine the association between the Nipple Stimulation for progress of labour during first stage among primigravida mothers in experimental group with their selected demographic variables.

Hypotheses

H_1: There will be a significant reduction in the duration of first stage of labour among primigravida mothers who receive Nipple Stimulation than primigravida mothers who do not receive Nipple Stimulation.

H_2: There will be a significant association between the progress of labour among primigravida mothers in experimental group with their selected demographic variables.

Operational Definition

1. First stage:

It extends from the 2cm to 10cm dilatation of the cervix.

2.Progress of labour:

It means regular uterine contraction, which causes progressive dilatation of the cervix which is assessed by modified partograph.

3. Primigravida mothers:

Women who has become pregnant for first time with the gestational age of 37-40 weeks.

4. Nipple Stimulation:

It refers to rolling both the Nipples back and forth with thumb and index finger, for 10minutes alternatively.

5. Effectiveness:

The outcome of Nipple Stimulation for progress of labour among primigravida mothers which is measured by modified partograph.

Assumption

1.The Nipple Stimulation will be effective in reducing the duration of first stage of labour among primigravida mothers.

2.The Nipple Stimulation will stimulate the uterine contraction.

Delimitation

1. Data collection period is delimited for only one month .

2. The study is delimited only for the primigravida mothers without any complications.

3.The study is delimited only for the primigravida mothers with 37 – 40 weeks of gestational age.

Projected Outcome:

The Nipple Stimulation will helping reducing or shortening the duration of first stage of labour.

Conceptual Framework

The researcher adopted J.W Kenny's Open System Model (1990) based on input, through put, and output. The investigator adopted open system model which is aimed to focus on the effectiveness of Nipple Stimulation among primigravida mothers.

Input:

Based on J.W Kenny's Open System Model input can be matter, energy and information from the environment on the present study, environment refers to clinical setup and input refers to evaluate the progress of labor by Modified partograph which include uterine contraction, cervical dilatation and fetal heart rate during labour.

Throughput:

According to him, the matter, energy and information are continually processed through the system, which is also called complex transformation known as throughput process it is used of input (i.e) energy and information for the maintenance of homeostasis of the system. In the present study process includes providing Nipple Stimulation for experimental group and no intervention in control group followed by post test assessment was done in both groups.

Output:

J.W. Kenny's noted after processing the input and throughput, the system returns to the output matter, energy, information to the environment in an altered state. Change is a feature of the process that is observable and measurable as output which should be different from that which is entered into the system. In the present study, the output refers to improving the progress and shortening the first stage of labour in experimental group.

Feedback

According to him, feedback is the information of environmental responses to the system; output is utilized by the system in adjustment, correction and accommodation to the interaction with the environment.

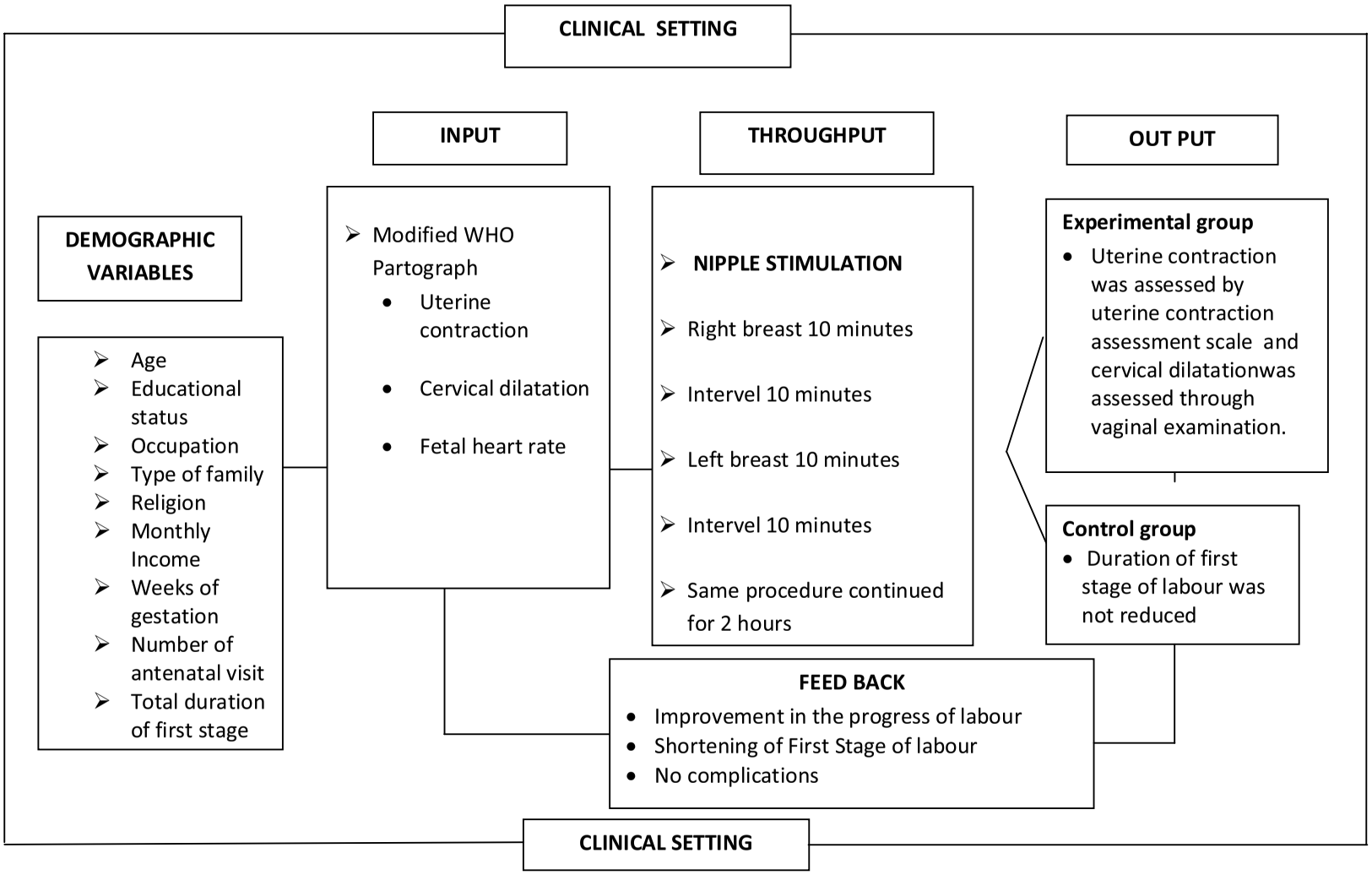

Fig. 1.CONCEPTUAL FRAMEWORK ON J.W.KENNY'S OPEN SYSTEM MODEL

8

Summary:

This chapter dealt with introduction, need for the study, statement of the problem,objectives,hypothesis,operationaldefinition,assumption,delimitation, projected out come, conceptualframework, and summary.

CHAPTER – II

REVIEW OF LITERATURE

The review of related literature is an essential aspect of scientific research. Its entails the systematic identification, reflection, critical analysis and reporting of existing information in relation to the problem of interest. The purpose of review of literature is to obtain comprehensive knowledge and in depth information about the effectiveness of Nipple Stimulation technique on uterine contraction in primigravida mothers.

The review of literature is organized under the following sections.

1. Literature related to Nipple Stimulation For Cervical Ripening
2. Literature related to Nipple Stimulation on uterine contraction
3. Literature related to Nipple Stimulation on progress of labour.

1. STUDIES RELATED TO NIPPLE STIMULATION FOR CERVICAL RIPENING

Kavanagh.et.al., (2005) conducted a study to assess the effect of breast stimulation on cervical ripening. One hundred patients who had completed 38 weeks' gestation and had uncomplicated antenatal courses were recruited and divided into two groups treatment and control. It was found that there was a significant change in the Bishop score of 3.96 +/- 1.34 points in the stimulated group as compared with the control group 1.04 +/- 1.03 points. After three days, a cross-over trial was performed with the extreatment group becoming the control and the excontrol group undergoing breast stimulation for the same period of time and under the same conditions. Again, the excontrol group was found to have a better mean cervical score (3.11 +/- 1.42 points) than the extreatment group (0.76 +/- 0.97 points) during breast stimulation. Result suggested that no uterine hypertonus was detected with gentle, unilateral breast stimulation, and there were no maternal or foetal complications as a result of this modality of cervical ripening.

Salmanym.et.al., (2007) conducted a study to find out the Breast stimulation for induction of cervical ripening in complicated term pregnancies

among 75 mothers. The indications for induction were prolonged pregnancy greater than 42 weeks (N = 12), hypertensive disorders of pregnancy (N = 26), suspected intra-uterine growth retardation (N = 30) and a combination of two or more of the above (N = 7). All patients had a modified Bishop score of less than 5 before the start of nine hours of unilateral breast stimulation spread over three days. Result of the study shows that twenty-nine out of the 75 patients went into labour during the three day period and, of the remainder, there was a significant improvement in the cervical score of 2.87 +/- 1.99. Three patients, all of whom had prolonged pregnancy, had exaggerated uterine activity. Two patients had fetal heart rate deceleration on antenatal cardio tocography during their first session of breast stimulation but this did not recur in any of their subsequent sessions. No patient had both exaggerated uterine activity and fetal heart rate deceleration. There was no case of perinatal mortality or morbidity.

Josieltenore M.D, (2009) conducted a comparative study to evaluates breast stimulation and oxytocin infusion as methods for cervical ripening among 40 in patients.Forty patients with a Bishop score of 5 or 6 were randomly selected for either breast stimulation or oxytocin infusion. In a similar group of 20 cases, no method was employed. Result showed that the Bishop score improved in 41.2% of breast stimulation cases. The breast stimulation is effective in ripening the cervix.

Kelly AJ, Thomas J9, (2010) conducted a comparative study to evaluate the effectiveness of breast stimulation for third trimester cervical ripening or induction of labour in comparison with no intervention or other methods of induction of labour Six trials (719 women) were included.Analysis of trials comparing breast stimulation with no intervention found a significant reduction in the number of women not in labour at 72 hours (62.7% versus 93.6%, relative risk (RR) 0.67, 95% confidence interval (CI) 0.60 to 0.74). When comparing breast stimulation with oxytocin alone the analysis found no difference in caesarean section rates (28% versus 47%, RR 0.60, 95% CI 0.31 to 1.18). No difference was detected in the number of women not in labour after 72 hours (58.8% versus 25%, RR 2.35, 95% CI 1.00 to 5.54) or rates of meconium staining. Breast stimulation appears beneficial in

relation to the number of women not in labour after 72 hours, and reduced postpartum haemorrhage rates.

2. LITERATURE RELATED TO NIPPLE STIMULATION ONUTERINE CONTRACTION

Chayen B, (2000) conducted a experimental study to assess the effectiveness of Nipple Stimulation on uterine contraction among 317 antenatal mothers contraction test were done using an automatic electric breast pump. In this study Nipple Stimulation was widely used for producing uterine contraction. This method was successful in achieving adequate contractions in 84.2 percent.

Morrison J C. et. al., (2000) conducted a comparative study to assess the effectiveness of Nipple Stimulation on uterine contraction. The total size of the sample was 1378 groups were divided in to three groups in that 838 mothers for non-stress tests, 115 mothers selected for spontaneous contraction stress test and 425 mothers selected for Nipple Stimulation Contraction Stress Tests (NS-CSTs). The study results revealed Nipple Stimulation contraction stress test was highly effective when compared to other tests.

Reprods J, (2000) conducted a prospective study to assess the effectiveness of Nipple Stimulation versus oxytocin on uterine contraction. They underwent antenatal stress tests on a total of 203 patients. One hundred and four Nipple Stimulation Contraction Stress Tests (BSTs) and 99 Oxytocin Challenge Tests (OCTs) were performed.When test time was compared between the two groups they revealed a significant difference and concluded that the breast stimulation test was successful rate of [78%.]

Macmillan J B and Hale, (2001) conducted a comparative study to assess the effectiveness of contraction stress testing with mammary self stimulation. In this study 156 women with high risk pregnancies performed mammary self stimulation. Performing a contraction stress test through mammary self stimulation was found to shorten the time that successful patients stayed in the testing area and eliminated the need for an intravenous oxytocin challenge test.

Keegan K A. et. al., (2002) conducted a comparative study to assess the effectiveness of Nipple Stimulation on uterine contraction. In this they used Nipple Stimulation to induce uterine contractions for a contraction stress test Breast Stimulation Contraction Stress Test (BSCST) with 657 patients made 1,484 attempts with the BSCST and were successful in 1,072 trials (72.2%). The time required for an adequate response was 23.8+/- 15.2 minutes, with 87.5 percent of patients responding in less than 30 minutes with this study. They concluded that breast Stimulation Contraction Stress test appeared to be a reasonable alternative to the oxytocin Challenge Test, with elimination of the intravenous line and oxytocin administration and with a shorter testing time.

Keegan J R. (2003) conducted a prospective study on Nipple Stimulation technique for a uterine contraction. The total size of the sample was 753. In this study 127 Nipple Stimulation contraction stress tests were performed on 753 patients. The induction of uterine contraction induction was unrelated to parity,gestational age, but was related to the presence of spontaneous pre stimulation contractions.. The study concluded that Nipple Stimulation helped to increase the uterine contraction.

Singh K .et .al., (2005) conducted a experimental study to assess the effects of Nipple Stimulation on intra uterine activity in late pregnancy. In this they studied nine healthy pregnant subjects at term. All of them showed an increase in uterine activity varying from 10 to 73 percent. Hence they concluded that Nipple Stimulation was associated with higher incidence of increased uterine activity in terms of frequency, intensity and basal tone.

Susanne J. Kistin,(2007) conducted a comparative study to evaluate the effectiveness of Nipple Stimulation to initiate labour contractions among 19 mothers. Nipple and breast stimulation have been used to induce and augment labor. Nipple Stimulation results in the production of endogenous oxytocin, which causes contractions. The review found that when compared to both no intervention and oxytocin induction, breast stimulation significantly reduced both the number of women not in labor after 72 hours and the incidence of postpartum hemorrhage. Bilateral, simultaneous breast stimulation is not recommended because of an

observed increased incidence of uterine hyperstimulation.Nipple Stimulation is also not recommended for women who are at risk for uteroplacental insufficiency because there may be an increased likelihood of adverse outcomes.

ZentralblGynakol ,(2007) conducted a study to assess the effectiveness of nipple self stimulation. Self stimulation of nipples were performed in 155 late pregnant women in connected antenatal cardiotocography (non-stress test). Cardiotocographs were interpreted using an ownscore. Uterine contractions could be produced by Nipple Stimulation in 111 women(71.6 percent). In 13 cases with score six to eight these contraction contributed to explanation of fetal condition. In additional 11 cases with score nine to ten the attention was focussed to the reduced fetal or placental capacity by the suspect cardiotocogram. In this group frequency of caesarean section was increased significantly. In cases with successful Nipple Stimulation the rate of labour induction with effect was higher. Oxytocin liberation by Nipple Stimulation may be regarded as endogenous oxytocin stress test. This simple procedure which can be done quickly and without danger is supposed to be a good supplement to non-stress test. Its reliability can be improved and the success of induction of labour estimated.

Meyer l. Heinzls, (2010) conducted a study to assess the effectiveness of breast stimulation in a stress test. One hundred women were selected from woman's hospital of the University of Basel. The stimulation was done unilaterally with a breast pump each nipple was stimulated for 15 minutes, 30 of them had three or more contractions, 12 mothers had no contractions. Prestimulation contraction have an influence on the success rate, 50 percent of mothers in the group with the prestimulation contractions had a successful test. The acceptance was good.

Stock S. et. al., (2011) conducted a study to assess the effectiveness of Nipple Stimulation on uterine activity; fetal heart rate and plasma oxytocin level in healthy full term pregnant woman were studied. Ten women in weeks of 38 to 39 weeks of pregnancy stimulated their nipples for 30 minutes. Nine of the ten mothers experienced uterine contraction. One woman showed signs of uterine hyperactivity the fetal heart rate declarations. Blood samples were drawn at 15 seconds of intervals during 5 to 6contractions and oxytocin levels were measured with

radioimmunoassay. Oxytocin levels rise significantly during Nipple Stimulation and short bursts of oxytocin were recorded during contractions. Nipple Stimulation has been used to induce labour; data may suggest that oxytocin released in response to such stimulation is responsible for the induced contraction.

3. LITERATURE RELATED TO NIPPLE STIMULATION ONPROGRESS OF LABOUR.

Cucco V,(2000) conducted a study to assess the effectiveness of Nipple Stimulation on induction of labour. One hundred and three mothers were selected with 40 to 42 weeks of gestation. In this study 52 mothers received Nipple Stimulation and 48 received no treatment. Nipple Stimulation was successful, 83.3 percent of the mothers delivered vaginally. The researcher concluded that mothers received Nipple Stimulation had a good outcome than the control group.

Meye JF, (2009) conducted a study to assess the effectiveness of Nipple Stimulation on induction of labour. Ninety one samples were selected for this study. Mothers received Nipple Stimulation throughout the labour with the interval of 15minutes and 88% of mothers had a normal vaginal delivered with in 24 hours. The researcher concluded that Nipple Stimulation helps in induction of labour.

Stein, et. al ., **[2010]** conducted a comparative study to assess the effect of Nipple Stimulation and oxytocin to progress of labor and risk for fetus at London.Totally 600 samples were selected by random technique and the study reported a statistically significant rate of cervical dilatation of 2cm /hr. While using Nipple Stimulation.

Al-harari A H. et. al., (2010) conducted a prospective comparative study to assess the effectiveness of Nipple Stimulation on induction of labour in mother with severe preeclampsia or near term. One hundred and thirteen mothers were selected they were divided in to two groups. One group was received Nipple Stimulation and other group was not received intervention. Maternal age, parity, initial cervical

status, the rate of caesarean section, and neonatal outcomes were analysed and compared to the control group. 69.6% of mothers had vaginal delivery. The researcher concluded that Nipple Stimulation was an effective agent for ripening of the cervix for experimental group.

Changnoi A. et. al., (2011) conducted a comparative study to assess the effectiveness of Nipple Stimulation versus cervical ripening on induction of labour. Sixty samples were selected for this study. One group received Nipple Stimulation. Nipple Stimulation had higher rate compared with the control group (236.2±110.1μg versus 103.1±35.7μg; p=0.001 and25.0% versus6.3%; p=0.03). The researcher concluded that Nipple Stimulation was effective for cervical ripening.

Surbek D. et. al., (2011), conducted a comparative study to assess the effectiveness of Nipple Stimulation versus cervical ripening on induction of labour. Five hundred and twelve samples were selected for this study. One group received Nipple Stimulation and other group received cervical ripening. The researcher revealed that Nipple Stimulation was an alternative measure for induction of labour.

MarianijNeto C. et. al., (2011) conducted a comparative study to assess the effectiveness of Nipple Stimulation versus enema on induction of labour. Total numbers of mother selected for this study were 238. In that 184 mothers received Nipple Stimulation and the remaining mothers received enema. All the sample mothers fulfilled the criteria for cephalic presentation, intact membranes, and bishop score <3. Obstetric and neonatal data were analysed and compared between two groups and the results revealed similar effect for both groups. The researcher concluded that Nipple Stimulation and enema are effective in vaginal child birth induction.

AlamA Y. et. al., (2011) conducted a comparative study to assess the effectiveness of Nipple Stimulation versus premature rupture of membranes on induction of labour. Two hundred mothers were selected for the study sample. In that 100 mothers received Nipple Stimulation and another 100 mothers received premature rupture of membranes. Labour commenced in a mean of 6.67 hours (±3.63) for group A, a mean of 8.41 hours (±5.13) in group B (P=0.09). The

researcher concluded that Nipple Stimulation is an better alternative for premature rupture of membranes.

Rayburn W F. (2011), conducted a study to assess the effectiveness of Nipple Stimulation on cervical dilatation. Three seventy four mothers with modified bishop scores of four or lower before induction of labour were randomly assigned to receive Nipple Stimulation100(n=118), 150(125), 200(n=131). The primary outcome was proportion of vaginal deliveries within 24 hours. The researcher concluded that Nipple Stimulation helps in reduction of vaginal delivery duration.

Sylvia Brown . (2011), conducted a study to assess the effectiveness of Nipple Stimulation on shortening the duration of labour. The sample consisted of 108 mothers; 57 (52.8%) received Nipple Stimulation while 51 (47.2%) were in the control group. The findings suggest that the Nipple Stimulation can be received by women during their pregnancy, it will shorten the labour with no identified side effects for the women or their babies.

CHAPTER-III

METHODOLOGY

Methodology deals with the research approach, research design, the setting, sample and sampling technique, instrument, data collection, and analysis.

Research Approach:

The Research Approach used for this study was a quantitative research approach.

Research design:

The design used for this study was **quasi-experimental non equivalent control group time series design.** Observations was made before and after intervention.[Nipple Stimulation]

Group	**Pre test**	**Intervention**	**Post test**		
Experimental	O_1	X	O_2	O_3	O_4
Control	O_1	-	O_2	O_3	O_4

X =Nipple Stimulation.

O_1= Assess the level of uterine contraction, cervical dilatation, fetal heart rate before Nipple Stimulation in pre test.

O_2 = Assess the level of uterine contraction, and fetal heart rate 30 minutes After Nipple Stimulation and cervical dilatation 4 hours after Nipple Stimulation in post test.

O_3 = Assess the level of uterine contraction, and fetal heart rate 30 minutes After Nipple Stimulation and cervical dilatation 6 hours after Nipple Stimulation in post test.

O_4 = Assess the level of uterine contraction, and fetal heart rate 30 minutes afterNipple Stimulation and cervical dilatation 8 hours after Nipple Stimulation in post test.

Variables:

Independent variable:

The Nipple Stimulation was the independent variable.

Dependent variable:

The dependent variables were:

1. Duration and frequency of uterine contraction regarding progress of labour during first stage of labour among primigravida mothers.
2. Cervical dilatation regarding progress of labour during first stage of labour among primigravida mothers.

Setting of the study:

The experimental group was selected from Lakshmi Mathavan Hospital Tirunelveli which is 60km away from the Nehru Nursing College. It is 150 bedded hospital and includes antenatal ward, postnatal ward, labour room gynecological ward, obstetric operation theatre and newborn unit. Around 200-300 deliveries take place per month. Out of them approximately 150 mothers undergo normal delivery and 50 mothers undergo cesarean section.

The control group was selected in George Mission Hospital at Nagercoil, which is 45 km away from the Nehru Nursing College. It is 100 bedded hospital, and includes antenatal ward, postnatal ward, labour room and gynecological ward. Around 200deliveries take place per month. Out of them approximately 150 mothers undergo normal delivery and 50 mothers undergo cesarean section.

Population:

Target population:

The target population was primigravida mothers.

Accessible population:

The accessible population consisted of primigravida mothers with 37 to 40 weeks of gestational age and who were in the first stage of labour.

Sample:

The Study population was primigravida mothers who were full filled the inclusion criteria.

Sample technique:

Non probability convenience sampling technique.

Sample size:

Sample consisted of 60 primigravida mothers. 30 mothers were in experimental group and 30 mothers were assigned in control group.

Criteria for selection of the sample:

Inclusion criteria:

- Primigravida mothers who were in spontaneous onset of labour
- Primigravida mothers who were in mild contraction with 2cm dilatation.
- Primigravida mothers with 37-40 weeks gestation

Exclusion criteria

1. The primigravida mothers who were not willing to participate.
2. Primigravida mothers were Suffering from mental illness.
3. Primigravida mothers were expected to have gestational and fetal complications.
4. Primigravida mothers were underwent on oxytocin infusion and prostaglandin gel application.

Description of tool:

The instrument consist of 2 sections.

Section A:Consisted of demographic variables of first stage primigravida mothers. Such as [age in years, education ,occupation, type of family, religion, and total

income of the family, weeks of gestation, number of antenatal visit till date, total duration of first stage of labour, and mode of delivery.]

Section B: The Modified partograph consist of uterine contraction , cervical dilatation and fetal heart rate to assess the progress of labour

Scoring procedure:

Observing the uterine contraction regarding duration of uterine contraction was classified as follows:

The contraction level from 1-10 seconds indicates very mild Uterine contraction and score was 1. The contraction level from 11-20 seconds indicates mild uterine contraction and score was 2. The contraction level from 21-30 seconds indicates low moderate uterine contraction and score was 3. The contraction level from 31-40 seconds indicates high modereate uterine contraction and score was 4. The contraction level above 40 seconds indicates severe uterine contraction and score was 5.

SCORING KEY:

Score	Uterine Contraction	Nature of Description of uterine contraction
1	Very Mild	Uterine contraction 1-10 seconds
2	Mild	Uterine contraction 11-20 seconds
3	Low Moderate.	Uterine contraction 21-30 seconds
4	High Moderate.	Uterine contraction 31-40 seconds
5	Severe	Uterine contraction above 40 seconds

Intervention:

The procedure was as follows, each day as the mother gets admitted for labour the investigator selected two to three samples based on inclusive criteria and by using convenience sampling technique. The samples selected were primigravida mothers in latent phase with 2cm cervical dilatation. The investigator assessed the uterine contraction, cervical dilatation and fetal heart rate in both experimental and control group.

1. Explained the procedure and its effects to the mother.
2. Obtained the informed consent from the mother.
3. Then the mother was made to lie down in supine position. The investigator placing her thumb and index finger over the Nipple and stimulated the Nipple in a circular motion.Each breast Nipple was stimulated for a duration of 10 minutes. Leaving a gap of 10 minutes. Nipple Stimulation was carried on the alternate breast, again leaving a gap of 10 minutes.This process was continued for a total of 2 hours. With in the total time each of the right and left breast were stimulated for 3 times.
4. The uterine contraction and fetal heart rate was assessed after 30 minutes of the intervention.
5. Cervical dilatation was assessed after 4 hours of the intervention and continued for every 2 hours till the completion of first stage of labour.

Content validity:

The content validity of the tools was established on the opinion of two experts in the field of obstetrics and gynaecologist and three nursing experts. Tool was modified as per the consensus of all the experts and the tool was finalized.

Reliability:

Reliability of the tool was tested by the investigator and another Maternity nursing expert personal who was trained for the use of tools. The reliability of the tool was determined by inter- rater observer technique. Hence the tool was considered highly reliable.

Pilot study:

The pilot study was a trial run for major study. The tool was used for the pilot study to test the feasibility and practicability. The pilot study was conducted in Lakshmi Mathavan Hospital, Tirunelveli. A formal permission was obtained from the Director of the Lakshmi Mathavan Hospital [Dr.Madhubala MBBS, MD., DGO.] The mothers selected for the pilot study were not included in the main study.The period of pilot study was five days from 14.07.2014 to 18.07.2014.

The investigator introduced her self to the mothers and established rapport with the mothers. Five samples were selected for pilot study by using convenience sampling technique. Data pertaining to demographic variables were collected by interview method.

The investigator placing her thumb and index finger over the nipple and stimulated the Nipple in a circular motion. Each breast Nipple was stimulated for a duration of 10 minutes. Leaving a gap of 10 minutes.Nipple Stimulation was carried on the alternate breast, again leaving a gap of 10 minutes. Nipple Stimulation was carried on the first breast. This process was continued for a total of 2 hours. With in the total time each of the right and left breast got stimulated for 3 times.At the end of the intervention, the post test level of uterine contraction was checked every 30 minutes and cervical dilatation was assessed every 2 hours and the duration was scored for both groups by modified partograph.The intervention Nipple Stimulation was found to be feasible,effective,and easy to administer and the mothers were confortable during intervention.

PROCEDURE FOR DATA COLLECTION

The researcher got formal permission from the Principal and research Committee.The sample were selected in Lakshmi Mathavan Hospital. Data collection period was one month.Each day as the mother gets admitted for labour the investigator selected two to three cases based on inclusive criteria and by using convenience sampling technique.

The samples selected were primigravida mothers in latent phase with 2cm cervical dilatation. The investigator established rapport with primigravida mothers.

They were assured that no physical or emotional harm would be done during the course of the study.

Data pertaining to the demographic variables were collected by interview method. The investigator assessed pre test level of uterine contraction, cervical dilatation and fetal heart rate in both experimental and control group. Then the mother was made lie down in supine position. The investigator placing her thumb and index finger over the nipple and stimulated the Nipple in a circular motion. Each breast Nipple was stimulated for a duration of 10 minutes. Leaving a gap of 10 minutes.Nipple Stimulation was carried on the alternate breast, again leaving a gap of 10 minutes. Nipple Stimulation was carried on the first breast. This process was continued for a total of 2 hours. With in the total time each of the right and left breast got stimulated for 3 times.

Plan for data analysis:.

Both descriptive and inferential statistics were used.

Descriptive Statistics

- The frequency and percentage distribution were used in demographic data.
- Mean was used to assessed the pre and post test level of intensity of uterine contraction and duration of first stage of labour among primigravida mothers in experimental and control group.

Inferential Statistics

- Chi-square used to evaluate the effectiveness of Nipple Stimulation in the experimental and control group mothers.
- Chi-square test was used to associate the Nipple Stimulation for progress of labour during first stage among primigravida mothers in experimental and control group with their selected demographic variables.

Protection of human subjects:

The proposed study was conducted after the approval of research committee of the college. Permission was obtained from the hospital. The oral consent of each

individual was obtained before data collection. Assurance was given to the study participants regarding the confidentiality of the data collected

Summary:

This chapter dealt with the research approach, research design, variables, research setting, population, sample, sample size, sampling technique ,criteria for sample selection, description of tool, testing of tool, validity, reliability, pilot study, data collection procedure, data analysis plan, protection of human subjects, and summary.

CHAPTER-IV

Analysis and interpretation of data

This chapter deals with analysis and interpretation of the collected data from experimental group n = 30, control group n = 30 in selected hospitals related to their effectiveness of Nipple Stimulation for progress of labour among primigravida mothers.

Polit and Hungler (1999) state that statistical analysis is a method of rendering quantitative information in a meaningful and intelligible manner. Statistical procedure enables the researcher to organize, analyze, evaluate, interpret and communicate numerical information meaningful.

The purpose of analysis was to reduce the collected data to an intelligible and interpretable form, so that the relation of research problem can be studied and tested. The results were computed by using descriptive and inferential statistics.

The study findings are presented in sections as follows

Section: A

Data on demographic variables of primigravida mothers.

Section :B

Data on progress of labour among primigravida mothers.

Section: C

Data on effectiveness of Nipple Stimulation for progress oflabour among primigravida mothers. .

Section :D

Data on association between progress of labour among primigravida mothers with their selected demographic variables.

Table:1

Frequency and percentage distribution of demographic variables of primigravida Mothers in experimental group and Control group

n = 30

S.No	Variables	Experimental Group		Control group	
		Frequency	Percentage (%)	Frequency	Percentage (%)
1.	**Age**				
	a)18-22 years	7	23.33	7	23.33
	b)23-27 years	11	36.67	14	46.67
	c) 28-32 years	12	40.00	9	30.00
	d) 33 years and above	0	0	0	0
2.	**Education**				
	a) Illiterate	0	0	0	0
	b)Primary school	12	40.00	8	26.67
	c)High school	9	30.00	9	30.00
	d) Higher secondary	2	6.67	6	20.00
	e) Graduate	7	23.33	7	23.33
3.	**Occupation**				
	a)Homemaker	13	43.33	14	46.67
	b)Government	3	10.00	2	6.66
	c)Private	14	46.67	14	46.67
4.	**Type of family**				
	a) Nuclear	19	63.33	22	73.33
	b) Joint	11	36.67	8	26.67
5.	**Religion**				
	a) Hindu	11	36.67	11	36.67
	b) Muslim	15	43.33	13	43.33
	c)Christian	6	20.00	6	20.00

6.	**Monthly income**				
	a) Up to R.s 5000	0	0	4	0
	b) Rs.5001-10000	13	43.33	16	53.33
	c) Rs. 10000-20000	10	33.33	10	33.33
	d) Rs.20001-above	7	23.34	0	0
7	**Weeks of gestation**				
	a) 37-38 weeks	1	3.33	25	83.33
	b) 38+-39 weeks	19	63.33	5	16.67
	c) 39+-40 weeks	10	33.34	0	0
8	**Number of antenatal visit till date**				
	a) Regular	25	83.33	26	86.67
	b) Irregular	5	16.67	4	13.33
9	**Total duration of first stage of labour**				
	a) <10 hours	26	86.67	6	20
	b) 10-14 hours	4	13.33	22	73.33
	C)>10 hours	0	0	2	6.67
10	**Mode of delivery**				
	a) Normal	30	100.00	30	100.00
	b) Caesarian section	0	0	0	0
	c) Ventous	0	0	0	0
	d) Forceps	0	0	0	0

Table:1 reveals that among 30 primigravida experimental group mothers that 12 (40.00%) of them belonged to 28-32 years of age, 12 (40.00%) of them belonged to primary school,14 (46.67%) of them belonged to private, With respect to type of family 19 (63.33%) of them belonged to nuclear family ,13 (43.33%) of them belonged to muslim, monthly income of the family 13 (43.33%)of them belonged to Rs.5001-10000. Regarding weeks of gestation, 19 (63.33%) of them belonged to

38^{+}- 39 weeks of gestation ,25 (83.33%) of them had to regular antenatal visit, 26 (86.67%), of them had<10 hours of total duration of first stage of labour ,30 (100%)of them had normal vaginal delivery.

In control group among 30 primigravidamothers ,14 (46.67%) of them belonged to 23-27 years of age, 12 (40.00%) %) of them belonged to primary school,9 (30.00%) of them belonged to private, With respect to type of family 22 (73.33%) of them belonged to nuclear family ,13 (43.33%) of them belonged to muslim, monthly income of the family 16 (53.33%)of them belonged to Rs.5001-10000. Regarding weeks of gestation, 25 (83.33%) of them belonged to 37- 38 weeks of gestation ,26 (86.67%) of them had regular antenatal visit, 22(73.33%), of them had>10 hours of total duration of first stage of labour ,30 (100%)of them had normal vaginal delivery.

Table:2

Data on frequency distribution of duration of First stage of labour in Experimental group and Control group

Duration	Experimental group(n=30)		Control group (n=30)	
	Frequency	Percentage	Frequency	Percentage
a) <8hours	20	66.67	0	0.00
b) 8-10 hours	10	33.33	6	20.00
c) >10 hours	0	0.00	24	80.00

The Table 2 and figure 2 showed that 20(66.67%) of the primigravida mothers had less than 8 hours of duration,10(33.33%) mothers had 8-10 hours duration of first stage of labour and none of the mothers had the >10 hrs of duration of first stage of labour. In the control group none of the mothers had the less than 8 hours of duration, 6 (20%) mothers had 8-10 hours duration of first stage of labour24 (80%) mothers had more than10 hours duration of first stage of labour .

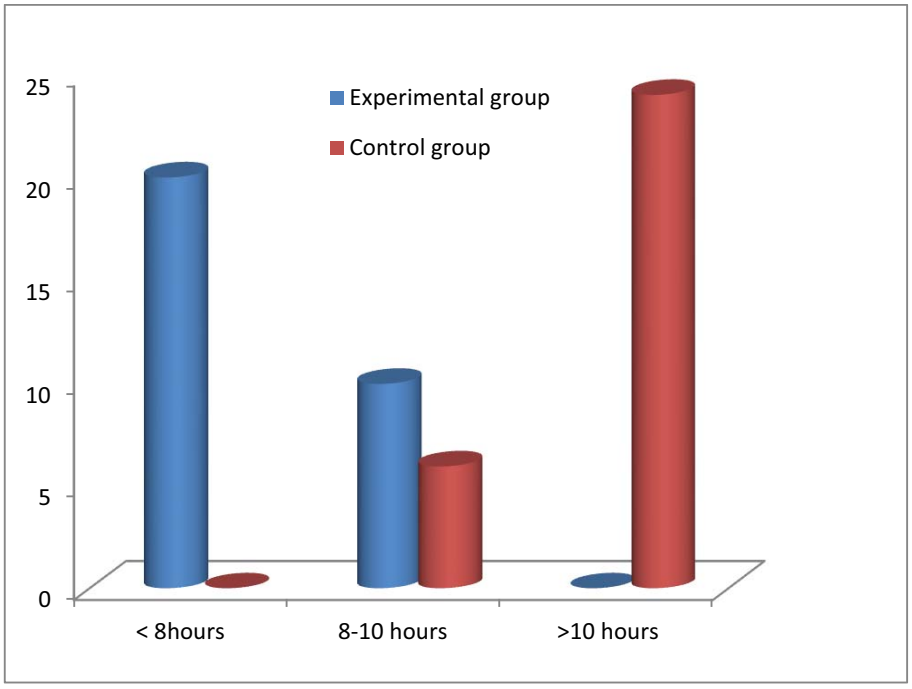

Fig. 2.

Duration of First stage of Labour in Experimental group and Control group

Table:3

Intensity of Uterine contraction in pretest among Experimental group and Control group subjects

Pretest				
Uterine contraction	**Experimental group**		**Control group**	
	Frequency	**percentage**	**Frequency**	**Percentage**
No contraction	8	27%	10	33%
Very mild	21	70%	20	67%
Mild contraction	1	3%	0	0%
Low moderate	0	0%	0	0%
High moderate	0	0%	0	0%
contraction	0	0%	0	0%

The Table 3 and figure 3shows that during pre testamong the experimental group mothers, 8(27%) mothers had no contraction, 21 (70%) had very mild uterine contraction and 1(3%) mothers had mild uterine contraction. In the control group 10(33%) mothers did not have uterine contraction, 20(67%) mothers had very mild uterine contraction.

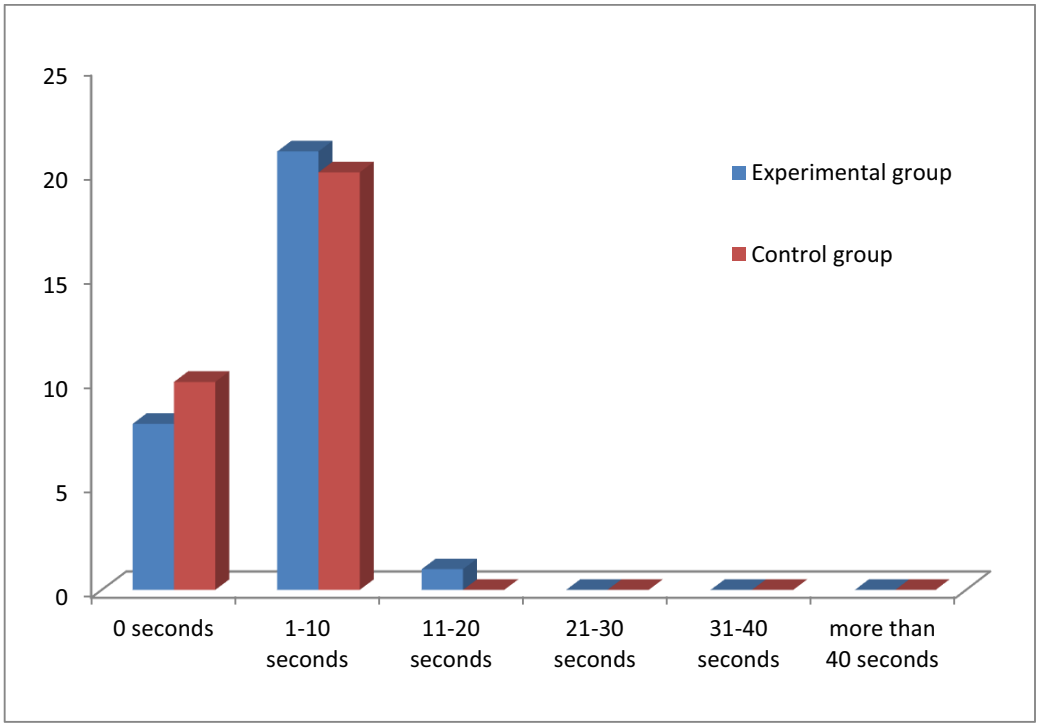

Fig. 3.

Intensity of uterine contraction in pre test among Experimental group and Control group

Table:4

Intensity of Uterine contraction in posttest among Experimental group and Control group subjects

Posttest				
Uterine contraction	**Experimental group**		**Control group**	
	Frequency	**Percentage**	**Frequency**	**percentage**
No contraction	0	0%	6	20%
Very mild 1-10 seconds	1	3%	20	67%
Mild contraction 11-20 seconds	22	74%	4	13%
Low moderate 21-30 seconds	6	20%	0	0%
High moderate 31-40 seconds	1	3%	0	0%
Severe contraction >40 seconds	0	0%	0	0%

The Table 4 shows figure 4 that duringpost test in the experimental group 22(74%) mothers developed mild uterine contraction and 6 (20%) mothers developed low moderate uterine contraction. In control group 20(67%) mothers developed very mild uterine contraction , 4 (13%) mothers developed mild uterine contraction and 6 (20%) mothers did not develope uterine contraction .

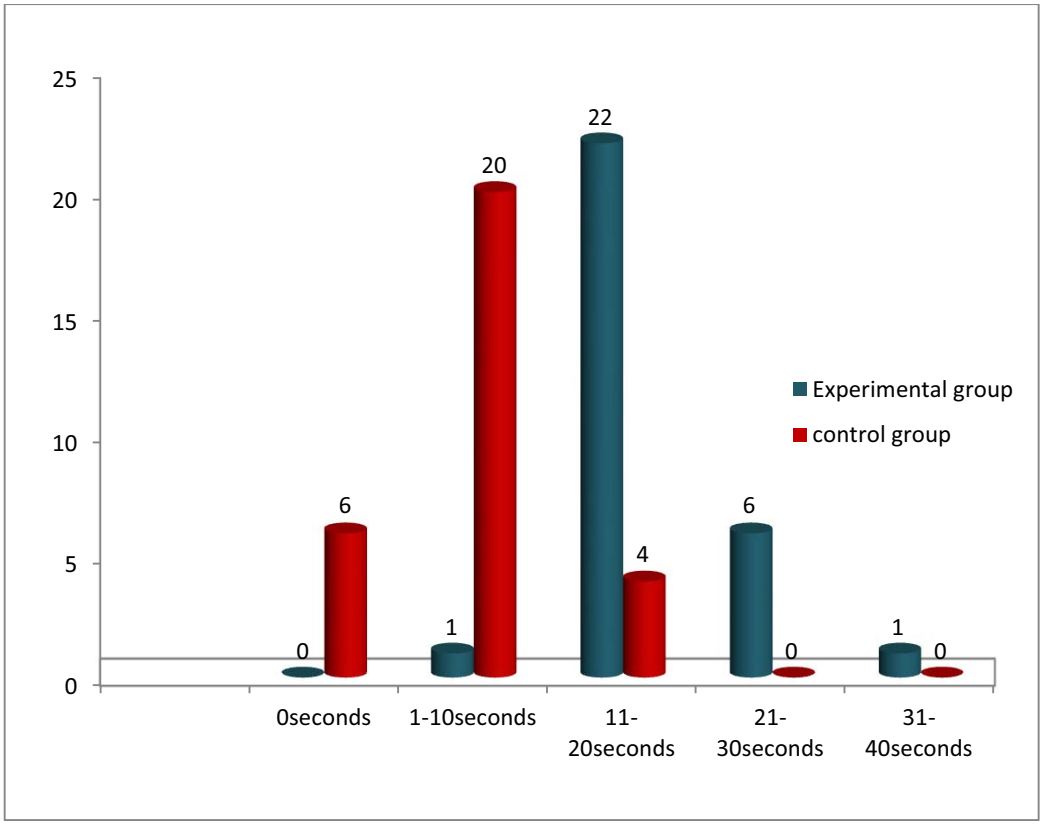

Fig.4.

Intensity of uterine contraction in post test among Experimental group and Control group

Table :5

Chi-square value on Intensity of uterine contraction in pre and post test among Experimental group

n= 30

Experimental group				
Uterine contraction	**Pretest**	**posttest**	**Chi-square**	**5% level of significance**
0 seconds	8	0	52.36	4 df 9.48
1 – 10 seconds	21	1		
11 – 20 seconds	1	22		
21 – 30 seconds	0	6		
31 – 40 seconds	0	1		

The Table 5 shows that the intensity of uterine contraction among experimental group, during pre test 8 mothers did not have uterine contractions and 21 mothers had very mild uterine contraction. In the posttest 22 mothers had mild uterine contractions, and 6 mothers had low moderate uterine contractions. The obtained Chi-square value was 52.36 and it shows the value was statistically significant at 0.05 level.So the Research Hypothesis was accepted .

Table:6

Chi-square value on Intensity of uterine contraction in post test among Experimental group and Control group

Experimental group		Control group		
Uterine contraction	**Posttest**	**posttest**	**Chi-square**	**5% level of significance**
0 seconds	0	6		
1 – 10 seconds	1	20		
11 – 20 seconds	22	4	42.66	4 df 9.48
21 – 30 seconds	6	0		
31 – 40 seconds	1	0		

The Table 6 and figure 5 shows that the intensity of uterine contraction during posttest among experimental group mothers, 22 mothers had mild uterine contraction ,6 mothers had low moderate uterine contraction. Among in the control group 20 mothers had very mild uterine contractions and 4 mothers had mild uterine contractions.The obtained Chi-square value was 42.66 and it shows the value was statistically significant at 0.05 level.So the Research Hypothesis was accepted.

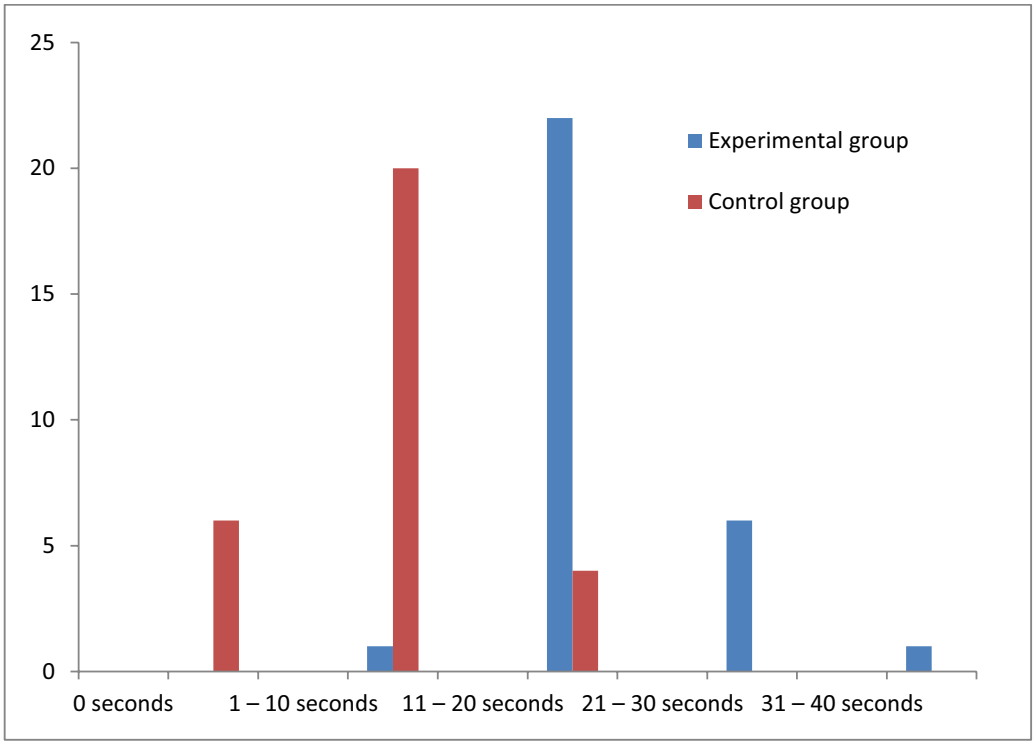

Figure.5

Intensity of uterine contraction in post test among Experimental group and Control group

Table: 7

Assessment of Cervical dilatation 4 hours after intervention.

n=30+30

Cervical dilatation	Experimental group[f]	Control group[f]	Chi-square(χ^2)	TABLE VALUE
a)2cm	0	13		
b)4cm	5	17		
c)6cm	18	0	44.45*	4 df
d)8cm	7	0		9.488
e)10cm	0	0		

The Table 7 shows that, among the Experimental group subjects 18 of them developed 6cm cervical dilatation, and 7 of them developed 8 cm cervical dilatation in 4 hours after intervention.

In the Control group subjects 17 of them developed 4 cm cervical dilatation, and 13 of them developed only 2 cm cervical dilatation in 4 hours after intervention.

The obtained Chi-square value was 44.45 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

Table :8

Assessment of Cervical dilatation 6 hours after intervention.

n=30+30

Cervical Dilatation	Experimental group[f]	Control group[f]	Chi-square (χ^2)	Table value
a)2cm	0	3		
b)4cm	1	14		
c)6cm	3	13	46.45*	4 df
d)8cm	11	0		9.488
e)10cm	15	0		

The Table 8 shows that, among the Experimental group subjects 15of them developed 10cm cervical dilatation, 11 of them developed 8 cm cervical dilatation in 6 hours after intervention.

In the Control group subjects 13 of them developed in 6cm cervical dilatation, 14 of them developed only 4 cm cervical dilatation, in 6 hours after intervention.

The obtained Chi-square value was 44.45 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

Table :9

Assessment of Cervical dilatation 8 hours after intervention.

n=30

Cervical dilatation	Experimental group[f]	Control group[f]	Chi-square(χ^2)	Table value
a)2cm	0	0		
b)4cm	0	7		
c)6cm	1	15		4 df
d)8cm	2	8	49.85*	9.488
e)10cm	27	0		

The Table 9 shows that, among the Experimental group subjects 27 of them developed 10cm cervical dilatation, 2 of them developed 8 cm cervical dilatation, in 8 hours after intervention.

In the Control group subjects 15 of them developed in 6cm cervical dilatation, 7 of them developed only 4 cm cervical dilatation, in 8 hours after intervention.

The obtained Chi-square value was 49.85 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

Table :10

Assessment of Cervical dilatation 10 hours after intervention.

n=30

Cervical dilatation	Experimental group[f]	Control group[f]	Chi-square	Table value
a)2cm	0	0		
b)4cm	0	1		
c)6cm	0	5	40*	4 df
d)8cm	0	18		9.488
e)10cm	30	6		

The Table 10 shows that, among the Experimental group subjects all 30 of them developed 10cm cervical dilatation, in 10 hours after intervention. With this subject 26 of them delivered with in 8 hrs after intervention.

In the Control group subjects 18 of them developed in 8cm cervical dilatation, 6 of them developed 10 cm cervical dilatation, in 10 hours after intervention.

The obtained Chi-square value was 40 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

Table:11

Association between Nipple Stimulation for progress of labour during first stage among primigravida mothers in experimental group with their selected demographic variable:

S.No	Variables	Duration of First stage of labour		Chi-square	5% level of significance
		<8 hours	> 8 hours		
1.	**Age**				
	a)18-22 years	2	5		3
	b)23-27 years	8	3	0.603	df
	c) 28-32 years	10	2	NS	7.81
	d) 33 years and above	0	0		
2.	**Education**				
	a) Illiterate	0	0		
	b)Primary school	8	4	0.004	
	c)High school	5	4	NS	4df
	d) Higher secondary	2	0		9.48
	e) Graduate	5	2		
3.	**Occupation**				
	a)Homemaker	8	5	0.022	2
	b)Government	2	1	NS	df
	c)Private	10	4		5.99
4.	**Type of family**				
	a) Nuclear	14	5	0.4331	1df
	b) Joint	6	5	NS	3.84
5.	**Religion**				
	a) Hindu	8	3	0.0018	2 df
	b) Muslim	8	5	NS	5.99
	c)Christian	4	2		

6.	**Monthly income**				
	a) Up to R.s 5000	0	0		
	b) Rs.5001-10000	9	4		
	c) Rs. 10000-20000	6	4	0.076	3df
	d) Rs.20001-above	5	2	NS	7.81
7	**Weeks of gestation**				
	a)37-38 weeks	1	0		
	b)38+-39 weeks	14	5	1.86	2 df
	c) 39+-40 weeks	5	5	NS	5.99
8	**Number of antenatal visit till date**				
	a)Regular	18	7	13.05*	1 df
	b) Irregular	2	3		3.84
9	**Total duration of first stage of labour**				
	a)<10 hours	18	8	0.64	2 df
	b)10-14 hours	2	2	NS	5.99
	c)>10 hours	0	0		
10	**Mode of delivery**				
	a)Normal	20	10		
	b)Caesarian section	0	0	0NS	3 df 7.81
	c)Ventous	0	0		
	d)Forceps	0	0		

*-Significance , NS-Non significant.

The Table 11 shows there was no association between the uterine contraction with respect to Nipple Stimulation and the selected demographic variables like age, education, occupation, type of family ,religion, and monthly income,weeks of gestation,total duration of first stage of labour,mode of delivery except number of antenatal visit.

CHAPTER-V

DISSCUSSION

Thepurpose of the study was to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage, among primigravida mothers in selected Hospitals at Tirunelveli.The study was conducted by using Quasi experimental design to select a sample.Among 60 primigravida mothers the 30 mothers were assigned in experimental group and 30 mothers were assigned in control group. The data were collected by the self observation method, and modified partograph were used to evaluate the progress of labour during first stage, among primigravida mothers.

The responses were analyzed through descriptive statistics (Mean,Frequency, Percentage,) and inferential statistics which (Chi-square). Discussion on the findings were arranged based on the objectives of the study

Objective -1

To assess the progress of labour among primigravida mothers in both experimental group and control group.

The study findings shows that20(66.67%) of the primigravida mothers had less than 8 hours of duration,10(33.33%) mothers had 8-10 hours duration of first stage of labour and none of the mothers had the >10 hrs of duration of first stage of labour. In the control group none of the mothers had the less than 8 hours of duration, 6 (20%) mothers had 8-10 hours duration of first stage of labour24 (80%) mothers had more than10 hours duration of first stage of labour (table 2 and figure 2)
.

Objective - 2

Toevaluate the effectiveness of Nipple Stimulation in progress of labour among primigravida mothers in experimental group and control group.

The study findings shows that the intensity of uterine contraction among experimental group, during pre test8 mothers did not have uterine contractions and 21 mothers had very mild uterine contraction. In the posttest 22 mothers had mild uterine contractions, and 6 mothers had low moderate uterine contractions. The obtained Chi-square value was 52.36 and it shows the value was statistically significant at 0.05 level.So the Research Hypothesis was accepted.

Regarding cervical dilatation findings shows that, among the Experimental group subjects 18 of them developed 6cm cervical dilatation, and 7 of them developed 8 cm cervical dilatation in 4 hours after intervention. In the Control group subjects 17 of them developed 4 cm cervical dilatation, and 13 of them developed only 2 cm cervical dilatation in 4 hours after intervention. The obtained Chi-square value was 44.45 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

In the Experimental group subjects 15 of them developed 10cm cervical dilatation, 11 of them developed 8 cm cervical dilatation in 6 hours after intervention. In the Control group subjects 13 of them developed in 6cm cervical dilatation, 14 of them developed only 4 cm cervical dilatation, in 6 hours after intervention. The obtained Chi-square value was 44.45 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.In the Experimental group subjects 27

of them developed 10cm cervical dilatation, 2 of them developed 8 cm cervical dilatation, in 8 hours after intervention.In the Control group subjects 15 of them developed in 6cm cervical dilatation, 7 of them developed only 4 cm cervical dilatation, in 8 hours after intervention. The obtained Chi-square value was 49.85 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

In the Experimental group subjects all 30 of them developed 10cm cervical dilatation, in 10 hours after intervention. With this subject 26 of them delivered with in 8 hrs after intervention. In the Control group subjects 18 of them developed in 8cm cervical dilatation, 6 of them developed 10 cm cervical dilatation, in 10 hours after intervention. The obtained Chi-square value was 40 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

All the chi-square values are statistically significant at 0.05 level.So the research hypothesis was accepted. Intervention Nipple Stimulation was effective in inducing wider cervical dilatation among Experimental group mothers.

Rayburn W F (2011) conducted a study to assess the effectiveness of Nipple Stimulation on cervical dilatation. Three seventy four mothers with modified bishop scores of four or lower before induction of labour were randomly assigned to receive Nipple Stimulation100(n=118), 150(125), 200(n=131). The primary outcome was proportion of vaginal deliveries within 24 hours. The researcher concluded that Nipple Stimulation helps in reduction in time of vaginal delivery.

Sylvia Brown (2011) conducted a study to assess the effectiveness of Nipple Stimulation on shorten the duration of labour. The sample consisted of 108 mothers; 57 (52.8%) received Nipple Stimulation while 51 (47.2%) were in the control group. The findings suggest that the Nipple Stimulation can be received by women during their pregnancy, it will shorten the labour with no identified side effects for the women or their babies.

Objective - 3

To determine the association between the Nipple Stimulation for progress of labour during first stage among primigravida mothers in experimental group with their selected demographic variables.

The study findings shows there was no association between the uterine contraction with respect to Nipple Stimulation and the selected demographic variables like age, education, occupation, type of family ,religion, and monthly income,weeks of gestation,total duration of first stage of labour,mode of delivery except number of antenatal visit.(Table 11)

CHAPTER-VI

SUMMARY, FINDINGS, CONCLUSION, IMPLICATIONS AND RECOMMENDATION

SUMMARY OF THE STUDY

The aim of the study was to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage of labour among primigravida mothers in selected Hospitals in Tamil Nadu.

The study was experimental in nature. Based on inclusion criteria selected a 60 primigravida mothers were selected in that 30 experimental and 30 control group by using non probability purposive sampling technique and a data were collected by self observation technique in Lakshmi Mathavan Hospital Tirunelveli,and George Mission Hospital at Nagercoil for a period of 4 weeks.

Study was based on system theory model. It provides a comprehensive systematic frame work for evaluate the effectiveness of Nipple Stimulation for progress of labour among primigravida mothers in the first stage of labour . Descriptive and inferential statistical test were used to report the findings**.**

MAIN FINDINGS OF THE STUDY

The study findings shows that20(66.67%) of the primigravida mothers had less than 8 hours of duration,10(33.33%) mothers had 8-10 hours duration of first stage of labour and none of the mothers had the >10 hrs of duration of first stage of labour. In the control group none of the mothers had the less than 8 hours of duration, 6 (20%) mothers had 8-10 hours duration of first stage of labour24 (80%) mothers had more than10 hours duration of first stage of labour (table 2 and figure 2)

The study findings shows that the intensity of uterine contraction among experimental group, during pre test8 mothers did not have uterine contractions and 21 mothers had very mild uterine contraction. In the posttest 22 mothers had mild uterine contractions, and 6 mothers had low moderate uterine contractions. The

obtained Chi-square value was 52.36 and it shows the value was statistically significant at 0.05 level.So the Research Hypothesis was accepted .

Regarding cervical dilatation findings shows that, among the Experimental group subjects 18 of them developed 6cm cervical dilatation, and 7 of them developed 8 cm cervical dilatation in 4 hours after intervention. In the Control group subjects 17 of them developed 4 cm cervical dilatation, and 13 of them developed only 2 cm cervical dilatation in 4 hours after intervention. The obtained Chi-square value was 44.45 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

In the Experimental group subjects 15of them developed 10cm cervical dilatation, 11 of them developed 8 cm cervical dilatation in 6 hours after intervention. In the Control group subjects 13 of them developed in 6cm cervical dilatation, 14 of them developed only 4 cm cervical dilatation, in 6 hours after intervention. The obtained Chi-square value was 44.45 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.In the Experimental group subjects 27 of them developed 10cm cervical dilatation, 2 of them developed 8 cm cervical dilatation, in 8 hours after intervention. In the Control group subjects 15 of them developed in 6cm cervical dilatation, 7 of them developed only 4 cm cervical dilatation, in 8 hours after intervention. The obtained Chi-square value was 49.85 and it shows the value was statistically significant at 0.05 level.So the research

hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

In the Experimental group subjects all 30 of them developed 10cm cervical dilatation, in 10 hours after intervention. With this subject 26 of them delivered with in 8 hrs after intervention. In the Control group subjects 18 of them developed in 8cm cervical dilatation, 6 of them developed 10 cm cervical dilatation, in 10 hours after intervention. The obtained Chi-square value was 40 and it shows the value was statistically significant at 0.05 level.So the research hypothesis was accepted. It is clear that Nipple Stimulation Intervention was effective in inducing wider cervical dilatation among Experimental group mothers.

All the chi-square values are statistically significant at 0.05 level. So the research hypothesis was accepted. Intervention Nipple Stimulation was effective in inducing wider cervical dilatation among Experimental group mothers.

CONCLUSION

The present study was to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage, among primigravida mothers. The findings of the study concluded that applying the Nipple Stimulation was effective on the increased the uterine contraction in primigravida mothers. By applying the Nipple Stimulation the duration of first stage of labour was reduced to 6-8 hours for 26 mothers and the remaining 4 samples the duration was 10 hours in experimental group. For the control group the duration of first stage of labour was 10 hours for 6 mothers and the remaining 24 samples the duration was 10 -14 hours. There is no reduction in the duration of First Stage of labour. Nipple Stimulation is safe and effective, easy to apply, not painful and can enhance comfort in mother in the labour period. Hence, could easily be adopted as a regular intervention. Therefore, the investigator felt that more importance should be given to the assessment of post assessment of uterine contraction by using Modified partograph.The conclusion was

Nipple Stimulation had good effect in developing strong Uterine contraction and increased Cervical dilatation shows the duration of first stage of labour was reduced in experimental group primigravida mothers. It shows the Nipple Stimulation was effective for improving the progress of labour among primigravida mothers.

IMPLICATIONS

The investigator has derived the following implications which are of vitalconcern in the field of Nursing Practice, Nursing Education, Nursing Administration and Nursing Research.

Implications for Nursing Practice

The midwives have a vital role in providing safe and effective nursing care to Increasing uterine contraction. This can be facilitated by motivating the nurse midwives to,

1. Have an in depth knowledge on non pharmacological method for increasing the uterine contraction and the cervical dilatation and physiological changes during normal labour.
2. Learn about accurate assessment of uterine contraction and cervical dilatation with the help of modified Partograph.
3. Develop skills in maintaining records of partograph for effective uterine Contraction and cervical dilatation and promote comfort.

Implications for Nursing Education

1. Ensure that the students learn the normal physiological changes duringlabour and its management.
2. Provide adequate clinical exposure for the students to give effective and safe nursing care in increasing uterine contraction among primigravida mothers.
3. Make use of available literatures and studies related to nonpharmacological measures for acceleration of uterine contraction.
4. Conduct in-service programme and continuing education programme for effectiveness of labor management.

5. Educate the students about various alternative therapies for labor management.
6. Encourage the students for effective utilization of research based practices.

Implications for Nursing Administration

1. Collaborative with governing bodies to formulate standard policies and protocols to emphasize nursing care in the primigravida mothers.
2. Ensure and conduct workshops, conferences, and seminars on non pharmacological methods to increase the uterine contraction and cervical dilatation to improve the progress of labour.

Implications for Nursing Research

1. As a Nurse Researcher, promote to conduct a more research on effective on progress labor on non pharmacological methods
2. Disseminate the finding of the research through conferences, seminars and publishing in Nursing Journal.

RECOMMENDATIONS

1. The study recommends the following future research.
2. The similar study can be conducted with larger samples for better generalization.
3. A study can be conducted to assess the knowledge and practice of Nipple Stimulation for progress of labour among nurse midwives.
4. A study can be conducted to assess the knowledge and attitude of other alternative therapies for labor progress among nurse midwives.
5. A study can be conducted to assess the effectiveness of other nursing measures such as aromatherapy on acceleration of uterine contraction among primigravida mothers.

BIBLIOGRAPHY

Books

- Attar Singh, (2007). *Acupressure-Do it yourself Therapy*. New Delhi: Navneet.
- Barbara, E. &Kozier (1995). *Fundamentals of Nursing. Nursing Diagnosis Association.*. North America: Mosby.
- Barbara.K. &Glenora. (2001). *Fundamental of nursing concept and Procedure.*. California: Addison Wesley.
- Basavanthappa, B.T, (2006*). Nursing Research.* (. Bangalore: Jaypee Brothers.
- Benett, V. et al, (2003). *Myles Text of Midwives*. London: Churchill Living Stone.
- Boback, M. & Irene et al., (1996). *Maternity Nursing.* (5thed). Philadelphia: Mosby Publication.
- Bodyazhina. (1987). *Text Book of Obstetrics Moscow*. New York: Mir. Publishers.
- Brink, J. Paemela., &Matriynn, J. Word (2000). *Advanced Design In Nursing Research*. New Delhi: Sage.
- Bursher.K. (1996). Obstetrics AndGynaecology Principle And *Practice.* New Delhi: Jaypee.
- Chakravarthy .S. (2005). *Manual of Obstetrics*. (2nded.). London.: Elsevier Publications.
- Daniel (Eds.). (2007). Biostatistics: A Foundation for analysis in the *Health Sciences.* New York: John Wiley & Sons.
- Dawn, C.S. (2003). Text Book of Obstetrics Including Perinatology *And Conception.* Calcutta: New Central Book agency.
- Dhiren. G .(2007). Be Your Own Doctor with Acupressure. Navneet Publications Limited.

- Didona, N.A. & Marks, M.G. (1998). Introductory Maternal New Born *Nursing.* USA: Lippincott.
- Dutta, D.C. (2004). Text Book & Obstetrics Including Gerontology and *Conception.*Calcutta: New Central Book Agency.
- Erna, E. Ziegal,. (1984). *Obstetric Nursing*. New York: Macmillan publishing company
- Gupta, S.P. (2003). *Statistical Methods*. New Delhi: Sultan Chand & Sons Publication.
- Hegffery. C. (2000). *Text Book of Obstetrics*. New York: Mosby Company.
- Ingalls, A. & Salerno. M, et al., (1999). *Maternal and Child Health Nursing*. London: The C.V Mosby Company.
- Irene. B,& Jensen et al. (1998). *Essential of maternity Nursing The Nurse And The Child Bearing Family*. Philadelphia: Mosby.
- Jacob,A. (2005). *Comprehensive Textbook of Midwifery***.** New Delhi: Jaypee Brothers
- Joyce et al. F. (1998). Conceptual models of nursing analysis *and Application.* A Prentice Hall Publication Company.
- Joyce.B. (2008*). Medical Surgical Nursin*g. Missouri: W.B. Saunders company.
- Lindw.C.,& Rebecca, J. (2001).*text book of midwives.* USA: SLACK in Corporate .
- Louise. H .(2000). Family Centred Maternity and New Born Care. NewYork: National Guidelines publications.
- Maltox, J.H. (1999). Care Textbook of Obstetrics and Gynaecology. California: Mosby .
- Margarat. (2002). *Textbook for Midwives*. London: Churchil Livingstone.
- Marthaj .S.(2000*). Introduction to Maternal and Child Health Nursing.* (8^{th}ed.). Philadephia: Churchill Living Stone.
- Menon, M. et al., (2001). Mudaliar and Menon's Clinical *Obstetrics*. Madras :Orient Longman Company.

- Nicholos, F.H. &Zwelling, E. (2004).*Maternal New Born Nursing Therapy andPractice*. London: W.B. Saunders.
- Perry. L. (2007). Maternity and Women Health Care. Missouri: Mosby.
- Polit F. (2005). *Nursing Research Principles and Methods.* New Delhi: J.B Lippincott Company
- Rao.S, P.S., Richard, J. (2002). An Introduction to Biostatistics: *A Manual for Students in Health Sciences.* (India: Prentice Hall India Ltd).
- Sharon .R. (1999). Maternity Nursing Family New Born and *Women Health Care*. London: Lippincott Company.
- Shrish, N. Daftary. (2005). *Manual of Obstetrics*.New York: Elsevier.

Journals

- Aya.,Vialles.,et.al., **(**2004). Chronbiology of uterine contraction: an observational study. *British Journal of Anaesthesia,* 93 (3), 451- 453.
- Bailliere. (1998). Non pharmacological approaches to management labour pain. *Journal Of Midwifery and Womens Health*. 49(6),1-3.
- Brown, S.T., Cambell, U. S & Sharma, P. S. (2005). Characteristics of uterine contraction as two stages of cervical dilatation. *Americian Journal of Journal of Obstetrics and Gynaecology,*38(3) 77-79
- Chang, J. M. Jancey., Andy H. Lee., Peter A. Howat., Ann Clarke., Kuio Wang &
- Chez, R. A., Jones et.al (1997). The challenge of complementary and alternative medicine. *Americian Journal of Obstetrics and Gynaecology*, 177,1156-1161.
- Chung, U. L & Conn, V. S. (2003) . Effects of breast stimulation on uterine contraction in the first stage of labour. *The Journal of Nursing Research*, 3, 167-80.
- Kannan., Jamison &Gatz, M.D (2001) .Maternal satisfaction and uterine contraction in woman selecting child birth. *Americian Journal of Obstetrics***,** 33, 184-186.

- Kitzinger.,Stathi, A et.al., Some cultural perspective of birth. *The British Journal of Midwifery*, 8(3), 120-124.
- Kuresh, M S. (2008) .Support in first stage of labour by female nurses first step in improving the quality of maternity services. *Journal Of Midwifery and Womens Health*, 212-219.
- Lee, M.K. &Chayovan. (2003). Effects of Nipple Stimulation on uterine contraction. *The Journal Of Alternatives and Complementary Medicine*, 19(2),109-111.
- LubnaAbushaika., ArowaOwesis.(2004). Effects of Nipple Stimulation on intra uterine activity. *International Journal Of Nursing*. 11(1), 33-38.
- Trevor. (2010). The natural history of normal first stage of labour. . *Journal Of Nurses Midwifes*, 22, 318-321.
- Vijayalakshmi, S. (2008). Social support during labour.Nightingale Nursing Times, 3(10), 53.
- Walsh, D. (2000). Evidence based care services – Birth environment. *The British Journal of Midwifery*, 8(5), 276-278.
- Yildirim, S., Sahin, U. S &Sarma, P. S. (2000). The effect of Nipple Stimulationon uterine contraction. *Americian Journal of Journal of Obstetrics and Gynaecology*, 123-124.

Websites

- Aminiotomy induce the cervical dilatation in the first stage of labour. Retrived from http://www.scielo.com
- Breast stimulation on induction of labour. Retrived from http://www.medscaps.com.
- Effectiveness of non pharmacological techniques during first stage of labour. Retrived from http://www.maternity wise.com.
- Nipple Stimulationreduce the length of the labour. *International Research Journal*. Retrived from http://www.pubmed.com.
- Non pharmacological approach to the management of uterine *Journal Of Midwifery and Womens Health*. Retrived from http://www.medscaps.com

- Physical and emotional impact on uterine contraction. *Journal Of Midwifery and Womens Health*. Retrived from http://www.wikipedia.org.
- Qu& Zhou .P. (2007). Retrived from http://www.eCAM advance access.
- Sylvia Brown. (2001). Effectiveness of non pharmacological approach to t induce the cervical dilatation in the first stage of labour. Retrived from http://www.medscape.com.
- Tin, Xia.,& Zhen ciyan. (2001). Breast stimulation on induction of labour. Retrived from http://www.medscaps.com.

APPENDIX-I

Copy of letter seeking permission to conduct the research study in Lakshmi Mathavan Hospital, Tirunelveli

From

J.Suja Msc.(N) II year,
Nehru Nursing College,
Vallioor, Tirunelveli.

To

The Medical Director,
Lakshmi Mathavan Hospital,
Tirunelveli.

Through

The Principal,
Nehru Nursing College,Vallioor.

Sub: Requisition for conducting the research study

Respected sir,

I am doing MSc(Nsg) II year in Nehru Nursing College at vallioor as a part of my curriculum requirement under The Tamilnadu Dr. MGR Medical university is to conduct research. I have selected **"A study to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage, among primigravida in selected Hospitals at Tirunelveli."**in your esteemed hospital.

Kindly I request you to grant me permission to conduct this study. I assure that I will abide the rules of the institution and information collected from the study Participants will not be disclosed.

Thanking you,

Place: Vallioor,
Date:

Yours faithfully,
(J.Suja)

APPENDIX-II

LETTER SEEKING EXPERT'S OPINION FOR CONTENT VALIDITY

From

J.SUJA,Msc.(N) II year,
Nehru Nursing College,
Vallioor, Tirunelveli.

To

Through

The Principal,
Nehru Nursing College,
Vallioor, Tirunelveli.

Respected Sir/Madam,

Subject: Request for opinion and suggestions of expert for establishing content validity of research tool.

I J.SUJA II year student of Master of Nursing course Obstetrical and Gynecological at Nehru Nursing College. I have selected this topic for my dissertation **"A study to evaluate the effectiveness of Nipple Stimulation for progress of labour during first stage, among primigravida in selected Hospitals at Tirunelveli."**To be submitted to Dr.M.G.R. Medical University, in partial fulfillment of university requirement for award of master of nursing degree. I humbly request you to kindly validate the tool and give your valuable suggestions.

Your prompt opinions and suggestions will be appreciated.

Thanking you,

Place: Vallioor, Yours faithfully,

Date: J.SUJA

List of experts for content validity of research tools

1. **Dr. PUNITHA GEORGE, M.B.B.S, D.G.O.**
   George mission hospital
   Ethamozhi Road,
   Nagercoil,K.K.Dist.

2.Dr.MADHUBALA,M.B.B.S,D.G.O
   Lakshmimathavan hospital
   Tirunelveli

3.T.C. SUGUNA, M.sc, N, Ph.D.
   Vice Principal,
   Sri mookambikacollege of nursing,
   Kulasekaram,
   KanyaKumari District.

4.Mrs. ANITA MARY LEENA. Msc. N,
   Department of Obstetrical and Gynecological Nursing,
   St. Xaviour Catholic College Of Nursing.
   Chungankadai,
   Nagercoil,
   KanyaKumari District.

5. **Miss. HEPSI BEAULA H, M.Sc., (N)**
   Associate Professor,
   Nehru Nursing College,
   Vallioor.

6. **RAJITHA., M.sc(N),**
   Reader of Obstetrical and Gynecological Nursing,
   CSI College of Nursing,
   Neyoor.

SECTION: A

DEMOGRAPHIC VARIABLES:

1. Age in years
    a) 18-22years
    b) 23-27years
    c) 28-32years
    d) 33 years and above
2. Education
    a) Illiterate
    b) Primary School
    c) High School
    d) Higher Secondary
    e) Graduate and above
3. Occupation
    a) Home maker
    b) government
    c) private
4. Type of family
    a) Nuclear family
    b) Joint family
5. Religion
    a) Hindu
    b) Muslim
    c) Christian
6. Monthly income of the family
    a) Up to Rs.5000
    b) Rs.5001-10000
    c) Rs.10001-20000
    d) Rs.20001&aboveRegular

Obstetrical History

7. Weeks of gestation

a) 37 - 38 Weeks

b) 38^{+} - 39 Weeks

c)39^{+} - 40weeks

8.Number of antenatal visit till date

a)Regular

b) Irregular

9. Total duration of first stage of labour?

a) <10hours

b) 10-14hours

c) >14hours

10)Mode of delivery

a)Normal

b)caesarean section

c)ventous

d)forceps

SECTION: B

MODIFIED PARTOGRAM

Name :

Age :

Date of Admission and time :

Gestational age :

Obstetrical score :

LMP :

EDD :

Membrane status :

Sample no :

Observation Time	1	2	3	4	5	6	7	8	9	10
Cervical Dilatation [cms]	1	2	3	4	5	6	7	8	9	10
Uterine Contraction Per mts	1	2	3	4	5	6	7	8	9	10
Fetal heart rate	1	2	3	4	5	6	7	8	9	10

PROCEDURE

1. Explain the procedure and its effect to the mother.

2. Obtain informed consent from mother.

3. Mother was made to lie down in supine position comfortably and privacy was maintained.

4. Placing thumb and index finger over the nipple and stimulated the nipple in a circular motion each breast nipple was stimulated for a duration of 10 minutes followed by a gap of 10 minutes Nipple stimulations was carried on the alternate breast, again leaving a gap of 10 minutes. This process of continued for a total of 2 hours. With in the total time each of the right and left breast got stimulated for 3 times.